

larger in proportion to the size of the animal than those of any of the allied species.

The following are the dimensions of the typical specimen, a female, preserved in spirit:—

Head and body 147 millim., tail 195, hind foot 31, forearm and hand 39·5, ear (above crown) 14.

Skull: basal length 31·5 millim., greatest breadth 20·0; nasals, length 14·0; interorbital constriction, breadth 4·2; interparietal, length 4·8, breadth 11·0; palate, length 17·6; palatal foramen 7·5; length of molar series 7·0; basi-cranial axis 12·0.

As to the other species incidentally mentioned under *H. pyrrhorhinus* in my former paper, I am indebted to Dr. Herluf Winge, of Copenhagen, for such a description of the true *H. mastacalis*, Lund *, as shows that *H. pyrrhonotus* is wholly distinct from that animal; while a personal examination of the type of *H. macrurus*, Gerv. †, in the Paris Museum, proves that, like *H. mastacalis*, it is a true *Rhipidomys*, and differs therefore very essentially from the Peruvian species here described.

XLI.—*A Synopsis of the Reptiles and Batrachians of the Province Rio Grande do Sul, Brazil.* By G. A. BOULENGER.

THE present list includes all the species of Reptiles and Batrachians hitherto obtained in the Province Rio Grande do Sul. The total numbers (63 for the former and 28 for the latter class, against 31 and 22 as given by Hensel, the first explorer of that district) show an increase almost entirely due to Dr. von Ihering's activity. In view of rendering this list more useful, I have intercalated keys to the genera and species, based on the most constant and easily ascertainable characters, as taken from specimens obtained in the Province, and every species is accompanied by an enumeration of the principal synonyms. The latter part of the work will be found to contain much original matter, especially as I have had access to the entire Henselian collection in the Berlin Museum.

The indication "B. M.; v. I." signifies that specimens have been sent to the Natural-History Museum by Dr. von Ihering.

* Blik Bras. Dyr., Dansk. Afhandl. viii. p. 279 (1841).

† Casteln. Exp. Amér. du Sud, Mamm. p. 3 (1855).

REPTILIA.

CHELONIA.

Testudinidæ.

CLEMMYS, Wagl.

Clemmys Dorbignyi.

Emys Dorbignyi, Dum. & Bibr. *Erp. Gén.* ii. p. 272; d'Orbigny, *Voy. Am. Mér.* v., *Rept.* p. 6, pl. i.

B. M.; v. I. Near Rio Grande.

Chelydidæ.

- a. Nuchal plate marginal; a pair of barbels on the chin. . . *Platemys*.
 b. Nuchal plate simulating a sixth vertebral; no barbels. . . *Hydromedusa*.

PLATEMYS, Wagl.

- A. Barbels nearly as long as the diameter of the eye, black at the base; upper surface of neck with flat warts; soft parts with dark spots or bands.
 a. A broad black band on each side of the head; plastron dirty yellow or brown; carapace with black and yellow lines or vermiculations *P. Geoffroyana*.
 b. A narrow black line on each side of the head; plastron yellow with black spots; carapace uniform olive-brown or with a few black spots *P. Hilairii*.
 B. Barbels very short, smaller than the warts on the upper surface of the neck, which are large, conical, erect; soft parts uniform olive-brown; plastron blackish *P. Spixii*.

Platemys Geoffroyana.

Emys Geoffreana, Schweigg. *Arch. Königsb.* i. 1812, p. 302.

Platemys Hilairii, Dum. & Bibr. *l. c.* p. 418.

Platemys Geoffreyana, part., Hensel, *Arch. f. Nat.* 1868, p. 350.

B. M.; v. I.

Platemys Hilairii.

Platemys Geoffreana, juv., Dum. & Bibr. *l. c.* p. 421.

Platemys Hilairii, Dum. & Bibr. *l. c.* p. 428; Burmeister, *Reise La Plata*, ii. p. 521.

Platemys Geoffreyana, part., Hens. *l. c.* p. 350.

Spatulemys Lasalle, Gray, *Ann. & Mag. Nat. Hist.* (4) x. 1870, p. 463, and xi. 1871, p. 73, pl. ii.

B. M.; v. I.

Platemys Spixii.

Platemys Spixii, Dum. & Bibr. *l. c.* p. 409.

B. M.; v. I. One example, from San Lorenzo.

HYDROMEDUSA, Wagl.

Hydromedusa tectifera.

Hydromedusa Maximiliani (non Mik.), Wagl. Syst. Amph. p. 135, pl. iii. figs. 25-42; Burmeister, An. Soc. Sc. Argent. xxi. 1886, p. 5.

Chelodina Maximiliani, Dum. & Bibr. l. c. p. 449; Hens. l. c. p. 355.

Hydromedusa tectifera, Cope, Proc. Am. Phil. Soc. xi. 1869, p. 147; Bouleng. Ann. & Mag. Nat. Hist. (5) xvi. 1885, p. 85.

Hydromedusa platanensis, Gray, Ann. & Mag. Nat. Hist. (4) xi. 1873, p. 302; Günth. Ann. & Mag. Nat. Hist. (5) xiv. 1884, p. 423, pl. xiv.

Hydromedusa Wagleri, Günth. l. c.

B. M.; v. I.

Chelonidæ.

THALASSOCHELYS, Fitz.

Thalassochelys caretta.

Testudo caretta, Linn. S. N. i. p. 351.

Testudo caouana, Daud. Rept. ii. p. 54.

Chelonia caouana, Dum. & Bibr. ii. p. 552.

Thalassochelys caretta, Bonap. Amph. Eur. p. 24.

B. M.; v. I.

CROCODILIA.

ALLIGATOR, Cuv.

Alligator latirostris.

Crocodylus yacare, Daud. Rept. ii. p. 407.

Crocodylus latirostris, Daud. l. c. p. 417.

Alligator cynocephalus, Dum. & Bibr. iii. p. 86.

Alligator latirostris, Hens. l. c. p. 348.

B. M.; v. I.

LACERTILIA.

Iguanidæ.

A. A transverse gular fold.

- a. A slight dorsal crest or denticulation; dorsal scales uniform *Emyalius.*
- b. No crest; dorsal lepidosis heterogeneous *Anisolepis.*
- c. No crest; dorsal scales uniform, granular *Urostrophus.*

B. No gular fold.

- a. Ventral scales smooth; male with anal pores *Liolaemus.*
- b. Ventral scales keeled; no anal pores *Saccodeira.*

ENYALIUS, Wagl.

Enyalius Iheringii.

Enyalius Iheringii, Bouleng. Ann. & Mag. Nat. Hist. (5) xv. 1885, p. 192, and Cat. Liz. ii. p. 120, pl. vii.

B. M. ; v. I.

ANISOLEPIS, Blgr.

Anisolepis undulatus.

Læmactus undulatus, Wieg. Herp. Mex. p. 46.

Læmactus obtusirostris, Wieg. l. c.

Anisolepis Iheringii, Bouleng. Ann. & Mag. Nat. Hist. (5) xvi. 1885, p. 85, and Cat. Liz. ii. p. 122, pl. ix. fig. 3.

Enyalius undulatus, Bouleng. Cat. p. 121.

Wiegmann's types, which had never received a proper description, have been examined by me in the Berlin Museum, and have led to the above identification.

B. M. ; v. I.

UROSTROPHUS, D. & B.

Urostrophus Vautieri.

Urostrophus Vautieri, Dum. & Bibr. Erp. Gén. iv. p. 78, pl. xxxvii. fig. 1; Hensel, l. c. p. 348; Bouleng. Cat. Liz. ii. p. 123.

B. M. ; v. I

LIOLEMUS, Gray.

Liolumus occipitalis.

Liolumus occipitalis, Bouleng. Ann. & Mag. Nat. Hist. (5) xv. 1885, p. 192, and Cat. Liz. ii. p. 156, pl. x. fig. 3.

B. M. ; v. I.

SACCODEIRA, Gir.

Saccodeira azurea.

Tropidocephalus azureus, F. Müller, Verh. nat. Ges. Basel, vii. 1882, p. 160, pl. —.

Liolumus azureus, Bouleng. Ann. & Mag. Nat. Hist. (5) xv. p. 192.

Saccodeira azurea, Bouleng. Cat. Liz. ii. p. 160.

B. M. ; v. I.

Anguidæ.

OPHIODES, Wagl.

Ophiodes striatus.

Pygopus striatus, Spix, Spec. nov. Lac. Bras. p. 25, pl. xxviii. fig. 1.

Pygopus cariococca, Spix, l. c. p. 26, fig. 2.

- Ophiodes stratus*, Wagl. Isis, 1828, p. 740; Dum. & Bibr. v. p. 789;
Hensel, l. c. p. 346; Bouleng. Cat. Liz. ii. p. 296.
Pygodactylus Gronovii, Wagl. l. c. p. 741.
B. M.; v. I.

TEIIDÆ.

- A. Dorsal scales small, juxtaposed.
a. Ventrals small, forming more than 20 longitudinal series; toes five *Tupinambis*.
b. Ventrals in 8 to 12 longitudinal rows; toes five *Cnemidophorus*.
c. Ventrals in 8 or 10 longitudinal series; toes four.... *Teius*.
B. Dorsal scales large, imbricate, strongly keeled.... *Pantodactylus*.

TUPINAMBIS, Daud.

Tupinambis teguixin.

- Lacerta teguixin*, Linn. S. N. i. p. 368.
Teius teguixin, Gray, Ann. Nat. Hist. i. p. 276.
Salvator Merianæ, Dum. & Bibr. v. p. 85.
Podinema teguixin, Hens. l. c. p. 347.
Tupinambis teguixin, Bouleng. Cat. Liz. ii. p. 335.

B. M.; v. I.

CNEMIDOPHORUS, Wagl.

Cnemidophorus lacertoides.

- Cnemidophorus lacertoides*, Dum. & Bibr. v. p. 134; Bouleng. Cat. Liz. ii. p. 373.
Cnemidophorus grandensis, Cope, Proc. Amer. Phil. Soc. xi. 1869, p. 158.
Fide Cope, l. c.

TEIUS, Merr.

Teius teyou.

- Lacerta teyou*, Daud. Rept. iii. p. 195.
Teius viridis, Merr. Tent. p. 60.
Teius teyou, Fitz. N. Class. Rept. p. 51; Bouleng. Cat. Liz. ii. p. 379.
Acrantus viridis, Wagl. Syst. Amph. p. 154; Dum. & Bibr. v. p. 143;
Hens. l. c. p. 347.
Acrantus teyou, Gray, Cat. Liz. p. 23.
Ameiva celestis, d'Orb. Voy. Amér. MÉR., Rept. p. 2, pl. v. figs. 1-5.

B. M.; v. I.

PANTODACTYLUS, D. & B.

Pantodactylus Schreibersii.

- Cercosaura Schreibersii*, Wiegman. Herp. Mex. p. 10.
Pantodactylus Dorbignyi, Dum. & Bibr. v. p. 431.

- Cercosaura (Pantodactylus) Schreibersii*, Peters, Abh. Berl. Ac. 1862, p. 182, pl. i. fig. 4.
Pantodactylus Schreibersii, Hens. l. c. p. 347; Bouleng. Cat. Liz. ii. p. 388.
Pantodactylus bivittatus, Cope, Proc. Ac. Philad. 1863, p. 103.

B. M.; v. I.

Amphisbænidæ.

- a. Snout rounded *Amphisbæna*.
 b. Snout strongly compressed, sharp-edged..... *Anops*.

AMPHISBÆNA, L.

- a. Suture between the nasals at least one third as long as that between the præfrontals; second and third upper labials in contact with the ocular *Darwini*.
 b. Suture between the nasals not one third as long as that between the præfrontals; second labial in contact with the ocular *Mildei*.

Amphisbæna Darwinii.

Amphisbæna Darwinii, Dum. & Bibr. v. p. 490; Peters, Mon. Berl. Ac. 1878, p. 781, pl. —. fig. 6; Strauch, Mém. Biol. Ac. St. Pétersb. xi. p. 403; Bouleng. Ann. & Mag. Nat. Hist. (5) xvi. p. 296, and Cat. Liz. ii. p. 442.

Amphisbæna camura, Cope, Proc. Ac. Philad. 1862, p. 350.

Amphisbæna vermicularis (non Wagl.), Hens. l. c. p. 339.

Amphisbæna heterozonata, Burm. Reise La Plata, ii. p. 527.

Amphisbæna trachura, Cope, Proc. Am. Phil. Soc. xxii. 1885, p. 187.

Aporarchus prunicolor, Cope, l. c. p. 189.

B. M.; v. I.

Amphisbæna Mildei.

Amphisbæna Mildei, Peters, Mon. Berl. Ac. 1878, p. 779, pl. —. fig. 3; Strauch, l. c. p. 395.

Porto Alegre. Berlin Mus.

ANOPS, Bell.

Anops Kingii.

Anops Kingii, Bell, Proc. Zool. Soc. 1833, p. 99, and Zool. Journ. v. 1834, p. 391, pl. xvi. fig. 1; Bouleng. Cat. Liz. ii. p. 451.

Amphisbæna Kingii, Dum. & Bibr. v. p. 476; Hens. l. c. p. 343; Strauch, l. c. p. 418.

B. M.; v. I.

Scincidæ.

MABUIA, Fitz.

Mabuia dorsivittata.

Mabuia dorsivittata, Cope, Proc. Ac. Philad. 1862, p. 350; Bocourt,

Miss. Sc. Mex., Rept. p. 407, pl. xxii. c. fig. 2; Bouleng. Ann. & Mag. Nat. Hist. (5) xvi. p. 87.

Euprepes (Mabuia) virgatus, Peters, Mon. Berl. Ac. 1874, p. 627.

? *Mabuia Joberti*, Thommin. Bull. Soc. Philom. (7) viii. 1884, p. 148.

Mabuia tetratænia, Boettg. Zeitschr. f. Naturw. lviii. 1885, p. 227.

B. M.; v. I.

O P H I D I A.

Colubridæ.

I. A single shield between the nasal and the eye; a pair of internasals; eye small, with round pupil; tail very short.

- a. No grooved fangs; a pair of præfrontals, in contact with the eye; anal single *Geophis*.
- b. Grooved fangs present; a single præfrontal, separated from the eye by a præocular; anal divided. *Elapomorphus*.

II. Loreal and præocular shields present*; a pair of internasals; pupil round.

A. No grooved fangs; maxillary teeth equal or subequal.

- a. Nostril pierced in a single nasal; tail not one fourth of the total length *Ablabes*.
- b. Nostril between two nasals; tail not one third of the total length; scales smooth; eye moderate .. *Coronella*.
- c. Nostril between two nasals; tail not one third of the total length; scales smooth; eye large *Ptyas*.
- d. Nostril between two nasals; tail not one third of the total length; scales keeled; side of belly angular *Spilotes*.
- e. Nostril between two nasals; tail more than one third of the total length *Herpetodryas*.

B. No grooved fangs; posterior maxillary teeth much enlarged and separated from the others by an interval.

- a. Tail not more than one fourth of the total length; snout and scales normal *Liophis*.
- b. Tail more than one fourth of the total length *Dromicus*.
- c. Tail short; dorso-lateral scales narrow, diagonal .. *Xenodon*.
- d. Tail short; snout pointed, turned up; rostral shield keeled above *Heterodon*.

C. Grooved fangs present.

- a. Grooved fangs moderate, not more than twice as long as the solid ones *Philodryas*.
- b. Grooved fangs very large *Tomodon*.

III. A single shield between the nasals; nostrils and eyes turned upwards; latter small, with round pupil *Helicops*.

* Except in *Tomodon dorsatus*.

IV. Pupil vertical.

- a. No grooved fangs; scales on the vertebral line
larger than the others *Leptognathus*.
b. Grooved fangs; scales equal; anal divided..... *Thamnodynastes*.
c. Grooved fangs; scales equal; anal entire *Oxyrhopus*.

GEOPHIS, Wagl.

Geophis reticulatus.

Geophis reticulatus, Bouleng. Ann. & Mag. Nat. Hist. (5) xvi. 1885, p. 87.

B. M.; v. I.

ELAPOMORPHUS, Wiegman.

Elapomorphus lemniscatus.

Elapomorphus lemniscatus, Dum. & Bibr. vii. p. 840; Jan, Icon. Oph. 14, pl. ii. fig. 3; Bouleng. Ann. & Mag. Nat. Hist. (5) xv. pp. 194 and 321, pl. x., and xvi. p. 296.

Elapomorphus reticulatus, Peters, Mon. Berl. Ac. 1860, p. 518, pl. — fig. 2.

Elapomorphus Iheringii, Strauch, Mém. Biol. Ac. St. Pétersb. xii. 1885, and Bull. xxix. p. 571.

Phalotris melanopleurus, Cope, Proc. Amer. Phil. Soc. xxii. (1885) p. 189.

B. M.; v. I.

ABLABES, D. & B.

Ablabes Agassizii.

Eirenis Agassizii, Jan, Icon. Oph. 15, pl. v. fig. 3.

Ablabes Agassizii, Bouleng. Ann. & Mag. Nat. Hist. (5) xvi. p. 87.

B. M.; v. I.

CORONELLA, Laur.

A. Third and fourth upper labials entering the orbit.

- a. Three temporals in contact with the outer border of the parietal; ventral shields plumbeous on the sides *pæcilopogon*.
b. Two temporals in contact with the outer border of the parietal; ventrals with black dots on the sides; a round light spot on each parietal close to the median suture .. *Iheringii*.

B. Fourth and fifth upper labials entering the orbit.

- a. Pale brown above, with three dark-brown longitudinal bands, the lateral passing through the eye *obtusa*.
b. Bluish-olive in spirits, with a more or less distinct brown vertebral band *Jægeri*.
c. Brown above, elegantly spotted with black and dotted with yellowish; a series of yellowish spots forming a line on each side of the back *anomala*.

Coronella pæcilopogon.

Rhadinaea pæcilopogon, Cope, Proc. Ac. Philad. 1863, p. 100; Günth. Zool. Rec. 1866, p. 125.

Enicognathus elegans, Jan, Arch. per la Zool. ii. 1863, p. 58, and Icon. Oph. 16, pl. i. fig. 3.

Dromicus melanocephalus, Peters, Mon. Berl. Ac. 1863, p. 277.

Coronella pæcilopogon, Bouleng. Ann. & Mag. Nat. Hist. (5) xv. 1885, p. 194.

B. M.; v. I.

Coronella Iheringii.

Coronella Iheringii, Bouleng. l. c. p. 194.

B. M.; v. I.

Coronella obtusa.

Rhadinaea obtusa, Cope, Proc. Ac. Philad. 1863, p. 101.

Coronella obtusa, Bouleng. l. c. p. 194.

B. M.; v. I.

Coronella Jægeri.

Coronella Jægeri, Günth. Cat. Col. Sn. p. 37.

Liophis (Ophiomorphus) dorsalis, Peters, Mon. Berl. Ac. 1863, p. 283; Hens. l. c. p. 325.

B. M.; v. I.

Coronella anomala.

Coronella anomala, Günth. l. c. p. 37; Bouleng. l. c. p. 194.

Lygophis rutilus, Cope, Proc. Ac. Philad. 1862, p. 80.

Coronella pulchella, Jan, Arch. per la Zool. ii. 1863, p. 48, and Icon. Oph. 17, pl. iii. fig. 4.

Aporophis anomalus, Cope, Proc. Am. Phil. Soc. xvii. 1877, p. 93.

B. M.; v. I.

LIOPHIS, Wagl.

A. Frontal considerably shorter than parietals.

a. Scales in 17 rows; ventrals unspotted, black-edged, numbering 165 to 183 *fuscus*.

b. Scales in 19 rows; belly spotted or variegated with black *pæcilogyrus*.

B. Frontal nearly as long as parietals.

a. Back with large dark spots; a light streak on each side of the posterior part of the back *almadensis*.

b. No large dorsal spots; no dorso-lateral streak *typhlus*.

Liophis fuscus.

Liophis Merremii (non Wied), Jan, Icon. Oph. 17, pl. v.

Liophis Merremii, part., Hensel, l. c. p. 324.

Liophis cobella (non L.), Bouleng. Ann. & Mag. Nat. Hist. (5) xv. p. 194.
Ophecomorphus fuscus, Cope, Proc. Am. Phil. Soc. xxii. 1885, p. 190;
 Bouleng. Ann. & Mag. Nat. Hist. (5) xvi. p. 297.

Differs from *L. Merremii* and *L. cobella* in the greater number of ventrals. This and the following species were confounded by Hensel, and are to be found united in the same bottle (no. 6831) in the Berlin Museum.

B. M.; v. I.

Liophis pæcilogyrus.

Coluber pæcilogyrus, Wied, Abbild.

Liophis Merremii, var. *pæcilogyrus*, Dum. & Bibr. v. p. 710.

Liophis reginæ, var. *sublineatus*, Cope, Proc. Ac. Philad. 1860, p. 252.

Liophis reginæ, var. *ornatissima*, Jan, Arch. per la Zool. ii. 1863, p. 296.

Liophis pæcilogyrus, Jan, Icon. Oph. 17, pl. vi. fig. 1.

Liophis reginæ, var. *viridicyanea*, Jan, l. c. 18, pl. ii. fig. 1.

Liophis Merremii, part., Hens. l. c.

Liophis Merremii, Bouleng. Ann. & Mag. Nat. Hist. (5) xv. p. 194.

Ophecomorphus neleagris, Cope, Proc. Am. Phil. Soc. xxii. p. 191.

This form differs from *L. Merremii* and *L. reginæ* in the number of rows of scales, viz. 19 instead of 17.

B. M.; v. I.

Liophis almadensis.

Natrix almadensis, Wagl. in Spix, Serp. Bras. p. 30, pl. x. fig. 3.

Liophis conirostris, Günth. Cat. Col. Sn. p. 46.

Liophis Wagleri, Jan, Arch. per la Zool. ii. 1863, p. 297, and Icon. Oph. 18, pl. iii. figs. 2, 3.

Liophis almadensis, Bouleng. Ann. & Mag. Nat. Hist. (5) xv. p. 194.

Aporophis conirostris, Cope, Proc. Am. Phil. Soc. xxii. p. 191.

B. M.; v. I.

Liophis typhlus.

Coluber typhlus, Linn. S. N. i. p. 378.

Xenodon typhlus, Schleg. Serp. ii. p. 94; Dum. & Bibr. vii. p. 760.

Liophis typhlus, Jan, Arch. per la Zool. ii. 1863, p. 300, and Icon. Oph. 18, pl. iv. fig. 2.

One specimen, from San Lorenzo, was sent by Dr. v. Ihering.

DROMICUS, D. & B.

- a. Eight upper labials, fourth and fifth entering the orbit;
 a pair of yellow lines, separated by three rows of
 scales, along the back and tail, and extending to the
 snout *flavifrenatus*.
 b. Nine upper labials; ventral plates dark-edged *melanostigma*.

Dromicus flavifrenatus.

Lygophis flavifrenatus, Cope, Proc. Ac. Philad. 1862, p. 80.

Dromicus amabilis, Jan, Icon. Oph. 24, pl. v. fig. 2.

Aporophis flavifrenatus, Cope, Proc. Am. Phil. Soc. xxii. p. 191.

One specimen, from San Lorenzo, was sent by Dr. v. Ihering.

Dromicus melanostigma.

Natrix melanostigma, Wagl. in Spix, Serp. Bras. p. 17, pl. iv. fig. 2.

Dromicus Pleii (non D. & B.), Günth. Cat. Col. Sn. p. 128.

Dromicus melanostigma, Jan, Icon. Oph. 24, pl. v. fig. 3; Bouleng.

Ann. & Mag. Nat. Hist. (5) xv. p. 195, and xvi. p. 297.

Aporophis cyanopleurus, Cope, Proc. Am. Phil. Soc. xxii. p. 191.

B. M.; v. I.

PTYAS, Fitz.

Ptyas pantherinus.

Coluber pantherinus, Daud. Rept. vi. p. 318; Schleg. Serp. ii. p. 143, pl. v. figs. 13 & 14.

Coryphodon pantherinus, Dum. & Bibr. vii. p. 181; Hens. l. c. p. 330; Jan, Icon. Oph. 24, pl. iii. fig. 1.

Pseudoelaps pantherinus, Cope, Proc. Ac. Philad. 1862, p. 349.

Drymobius pantherinus, Cope, Proc. Am. Phil. Soc. xxii. p. 192.

Ptyas pantherinus, Boettg. Zeitschr. f. Naturw. lviii. 1885, p. 233.

B. M.; v. I. One specimen, from Porto Alegre.

SPILOTES, Wagl.

Spilotes variabilis.

Coluber variabilis, Wied, Abbild.; Schleg. Serp. ii. p. 149, pl. vi. figs. 1 & 2.

Spilotes variabilis, Dum. & Bibr. vii. p. 220; Hens. l. c. p. 330.

B. M.; v. I.

HERPETODRYAS, Schleg.

Herpetodryas carinatus.

Coluber carinatus, Linn. S. N. i. p. 384.

Herpetodryas carinatus, Schleg. Serp. ii. p. 175, pl. vii. figs. 3-7; Dum. & Bibr. vii. p. 207; Hens. l. c. p. 330; Jan, Icon. Oph. 31, pl. ii.

B. M.; v. I.

XENODON, Schleg.

- a. Usually seven upper labials, sixth largest, third and fourth, or fourth only, entering the orbit; three or four postoculars; 19 rows of scales *rhabdocephalus*.
- b. Eight upper labials, seventh largest, fourth and fifth entering the orbit; two postoculars; 21 rows of scales *Neuwiedii*.

*Xenodon rhabdocephalus.**Coluber rabdocephalus*, part., Wied, Abbild.*Xenodon rhabdocephalus*, Schleg. Serp. ii. p. 87, pl. iii. figs. 6 & 7;

Günth. Ann. & Mag. Nat. Hist. (3) xii. 1863, p. 353, pl. v. fig. B;

Jan, Icon. Oph. 19, pl. iv. fig. 1; Hens. l. c. p. 325.

Xenodon rhabdocephalus, part., Dum. & Bibr. v. p. 753.

B. M.; v. I.

*Xenodon Neuwiedii.**Coluber rabdocephalus*, part., Wied, l. c.*Xenodon rhabdocephalus*, part., Dum. & Bibr. l. c.*Xenodon Neuwiedii*, Günth. l. c. p. 354, fig. C; Hens. l. c. p. 328.

I have examined Hensel's two specimens in the Berlin Museum (6836) and found the identification correct.

HETERODON, Latr.

a. None of the labials touch the orbit *Dorbignyi*.b. Third and fourth labials entering the orbit *histricus*.*Heterodon Dorbignyi.**Heterodon Dorbignyi*, Dum. & Bibr. vii. p. 772; Hens. l. c. p. 329;

Jan, Icon. Oph. 48, pl. iii. figs. 3-4.

Lystrophis Dorbignyi, Cope, Proc. Am. Phil. Soc. xxii. p. 193.

B. M.; v. I.

*Heterodon histricus.**Heterodon histricus*, Jan, Arch. per la Zool. ii. 1863, p. 224, and Icon.

Oph. 11, pl. iv. fig. 2.

B. M.; v. I. Two specimens, from Rio Cahy, near S. João de Monte Negro.

PHILODRYAS, Wagl.

A. Scales smooth.

a. Scales in 19 rows; seven upper labials, third and fourth entering the orbit; scales black-edged or with small black spots *Schottii*.b. Scales in 17 rows; seven upper labials, third and fourth entering the orbit; back with three dark longitudinal bands, the median occupying three series of scales. *tæniatus*.c. Scales in 19 rows; eight upper labials, fourth and fifth entering the orbit; green above, usually with a reddish-brown vertebral line *Olfersii*.B. Scales keeled; green above *æstivus*.*Philodryas Schottii.**Xenodon Schottii*, Schleg. Serp. ii. p. 91, pl. iii. figs. 8 & 9.*Dryophylax Schottii*, Dum. & Bibr. vii. p. 1118.*Philodryas Schottii*, Günth. Cat. Col. Sn. p. 125; Hens. l. c. p. 332.

Euophrys modestus, Günth. *l. c.* p. 139, and Ann. & Mag. Nat. Hist. (4) ix. 1872, p. 29.

Pseudophis Schottii, Cope, Proc. Ac. Philad. 1862, p. 348.

Liophis pæcilotictus, Jan, Arch. per la Zool. ii. 1863, p. 189; and Icon. Oph. 13, pl. vi. fig. 2.

B. M.; v. I.

Philodryas tenuiatus.

Philodryas tenuiatus, Peters, in Hens. *l. c.* p. 331.

The type specimen, in the Berlin Museum, is the only one I have yet seen.

Philodryas Olfersii.

Coluber Olfersii, Licht. Verz. Doubl. Mus. Berl. p. 104.

Coluber pileatus, Wied, Abbild.

Coluber herbeus, Wied, *l. c.*

Philodryas Olfersii, Wagl. Syst. Amph. p. 185; Hens. *l. c.* p. 332.

Herpetodryas Olfersii, Schleg. Serp. ii. p. 183, pl. vii. figs. 14 & 15.

Dryophylax Olfersii, Dum. & Bibr. vii. p. 1169; Jan, Icon. Oph. 49, pl. iii. figs. 2-4.

Philodryas æstivus.

Herpetodryas æstivus, part., Schleg. Serp. p. 186.

Dryophylax æstivus, Dum. & Bibr. vii. p. 1111; Jan, Icon. Oph. 49, pl. iii. fig. 1.

Philodryas æstivus, Günth. Cat. Col. Sn. p. 125.

Philodryas carinatus, Hens. *l. c.* p. 332.

Tropidodryas æstivus, Cope, Proc. Amer. Philos. Soc. xxii. p. 192.

B. M.; v. I.

TOMODON, D. & B.

- a. No loreal, the nasal touching the præocular; scales in 17 rows. *dorsatus.*
- b. Loreal present; scales in 19 rows *ocellatus.*

Tomodon dorsatus.

Tomodon dorsatus, Dum. & Bibr. vii. p. 934; Jan, Icon. Oph. 19, pl. vi. fig. 1; Hens. *l. c.* p. 325.

B. M.; v. I.

Tomodon ocellatus.

Tomodon ocellatus, Dum. & Bibr. vii. p. 938; Jan, *l. c.* fig. 2.

B. M.; v. I. One specimen, from San Lorenzo.

HELICOPS, Wagl.

Helicops carinicaudus.

Coluber carinicaudus, Wied, Abbild.

Helicops carinicaudus, Wagl. Syst. Amph. p. 170, and Icon. Amph. pl. vii.; Dum. & Bibr. vii. p. 744; Hens. *l. c.* p. 329; Bouleng. Ann. & Mag. Nat. Hist. (5) xvi. p. 297.

- Homalopsis carinicaudus*, Schleg. Serp. ii. p. 350, pl. xiii. figs. 17 & 18.
Helicops infratæniatus, Jan, Arch. per la Zool. iii. 1865, p. 245, and
 Icon. Oph. 28, pl. iii. fig. 3; Cope, Proc. Amer. Philos. Soc. xxii.
 1885, p. 193.
Helicops trivittatus, Cope, Proc. Amer. Philos. Soc. xvii. 1877, p. 92.
Helicops baliogaster, Cope, Proc. Amer. Philos. Soc. xxii. p. 193.

B. M.; v. I.

LEPTOGNATHUS, D. & B.

- a. Loreal shield not touching the eye; scales in 13 rows *Catesbyi*.
 b. Loreal shield entering the eye; scales in 15 rows;
 three upper labials posterior to those which enter
 the orbit; belly powdered with brown. *Mikanii*.
 c. Loreal shield entering the eye; scales in 15 rows;
 two upper labials posterior to those which enter
 the orbit; belly with large black spots *ventrimaculatus*.

Leptognathus Catesbyi.

- Dipsas Catesbyi*, Schleg. Serp. ii. p. 279, pl. xi. figs. 21-23.
Stremmatognathus Catesbyi, Dum. & Bibr. vii. p. 522.
Leptognathus Catesbyi, Günth. Cat. Col. Sn. p. 180; Cope, Proc. Ac.
 Philad. 1868, p. 107; Jan, Icon. Oph. 37, pl. ii. fig. 2; Cope,
 Proc. Amer. Philos. Soc. xxii. p. 193.

Introduced here on the authority of Cope, no specimens
 having been obtained by Hensel or by Dr. v. Ihering.

Leptognathus Mikanii.

- Dipsas Mikanii*, Schleg. Serp. ii. p. 277.
Anholodon Mikani, Dum. & Bibr. vii. p. 1165.
Leptognathus Mikanii, Günth. Cat. Col. Sn. p. 178; Cope, Proc. Ac.
 Philad. 1868, p. 108; Jan, Icon. Oph. 37, pl. vi. fig. 3; Bouleng.
 Ann. & Mag. Nat. Hist. (5) xv. p. 195.

B. M.; v. I.

Leptognathus ventrimaculatus.

- Leptognathus ventrimaculatus*, Bouleng. Ann. & Mag. Nat. Hist. (5)
 xvi. p. 87.

B. M.; v. I.

THAMNODYNASTES, Wagl.

- a. Scales keeled *Nattereri*.
 b. Scales smooth *strigatus*.

Thamnodynastes Nattereri.

- Coluber Nattereri*, Mikan, Delect. Faun. Bras.; Wied, Abbild.
Dryophylax Nattereri, Wagl. Syst. Amph. p. 181.
Dipsas Nattereri, Schleg. Serp. ii. p. 290; Dum. & Bibr. vii. p. 1149.
Thamnodynastes Nattereri, Günth. Cat. Col. Sn. p. 164; Hens. l. c.
 p. 332; Jan, Icon. Oph. 39, pl. ii. fig. 3.

B. M.; v. I.

Thamnodynastes strigatus.

Tomodon strigatus, Günth. Cat. Col. Sn. p. 52.

Tachymenis hypoconia, Cope, Proc. Acad. Philad. 1860, p. 247; Günth.

Zool. Rec. 1866, p. 126; Cope, Proc. Am. Philos. Soc. xxii. p. 192.

Mesotes obtusus, Jan, Arch. per la Zool. ii. 1863, p. 96, and Icon. Oph. 18, pl. vi. fig. 1.

Thamnodynastes punctatissimus (non Wagl.), Hens. l. c. p. 332.

Thamnodynastes Nattereri, var. *lævis*, Bouleng. Ann. & Mag. Nat. Hist. (5) xv. p. 195.

B. M.; v. I.

OXYRHOPUS, Wagl.

A. Seven upper labials (normally); loreal not or scarcely longer than deep.

a. A whitish blotch covers the occiput and nape *clælia*.

b. Uniform brown or blackish above *plumbeus*.

B. Eight upper labials.

a. Blackish above, black-and-yellow spotted inferiorly *clathratus*.

b. Above with black cross bands or rhomboidal spots; lower parts yellowish, uniform or brown-dotted *petalarius*.

Oxyrhopus clælia.

Coluber clælia, Daud. Rept. vi. p. 330, pl. lxxviii.

Lycodon clælia, part., Schleg. Serp. ii. p. 114.

Brachyruton clælia, Dum. & Bibr. vii. p. 1007; Jan, Icon. Oph. 35, pl. i. fig. 1.

Oxyrhopus clælia, Günth. Cat. Col. Sn. p. 189.

B. M.; v. I. One specimen, from near Rio Grande.

Oxyrhopus plumbeus.

Coluber plumbeus, Wied, Abbild.; Schleg. Serp. ii. p. 152, pl. vi. figs. 3 & 4.

Brachyruton plumbeus, Dum. & Bibr. vii. p. 1004; Jan, Icon. Oph. 35, pl. i. fig. 3.

Oxyrhopus plumbeus, Günth. Cat. Col. Sn. p. 189; Cope, Proc. Amer. Philos. Soc. xxii. p. 193.

B. M.; v. I.

Oxyrhopus clathratus.

Oxyrhopus clathratus, Dum. & Bibr. vii. p. 1026; Jan, Icon. Oph. 35, pl. iii. fig. 1.

Oxyrhopus immaculatus (non D. & B.), Hens. l. c. p. 333.

Oxyrhopus petalarius.

Coluber petalarius, Linn. S. N. i. p. 337.

Oxyrhopus petalarius, Wagl. Syst. Amph. p. 185; Dum. & Bibr. vii. p. 1033; Hens. l. c. p. 333; Jan, Icon. Oph. 36, pl. i. figs. 1 & 2.

Oxyrhopus rhombifer, Dum. & Bibr. p. 1018; Jan, Icon. Oph. 35, pl. v. fig. 2; Cope, Proc. Am. Philos. Soc. xxii. p. 193.

Oxyrhopus subpunctatus, Dum. & Bibr. p. 1016.

Oxyrhopus bipræocularis, Dum. & Bibr. p. 1030.

B. M.; v. I.

Elapidæ.

ELAPS, Schn.

- a.* Black annuli on the body equidistant..... *corallinus*.
b. Annuli in threes *lemniscatus*.

Elaps corallinus.

Coluber corallinus, Linn. S. N. i. p. 384.

Elaps corallinus, Wied, Abbild.; Schleg. Serp. ii. p. 440, pl. xvi. figs. 1-3; Dum. & Bibr. vii. p. 1207; Hens. l. c. p. 333; Jan, Icon. Oph. 41, pl. vi. figs. 1-3.

Micrurus Spixii, Wagl. in Spix, Serp. Bras. p. 48, pl. xviii.

Elaps lemniscatus.

Coluber lemniscatus, Linn. S. N. i. p. 386.

Elaps lemniscatus, Schn. Hist. Amph. ii. p. 291; Schleg. Serp. ii. p. 444, pl. xiv. figs. 6 & 7; Dum. & Bibr. vii. p. 1217; Hens. l. c. p. 333; Jan, Icon. Oph. 42, pl. v. fig. 1.

Elaps altirostris, Cope, Proc. Ac. Philad. 1859, p. 345, and 1862, p. 347.

B. M.; v. I.

Viperidæ.

- a.* Tail simple..... *Bothrops*.
b. End of tail with horny appendages (rattle) *Crotalus*.

BOTHROPS, Wagl.

- a.* Scales in 21 to 27 rows on the middle of the body; no bar on the rostral shield *diporus*.
b. Scales in 29 or 31 rows on the middle of the body; back with alternating C-shaped black spots; a dark vertical bar on the rostral shield *alternatus*.

Bothrops diporus.

Bothrops diporus, Cope, Proc. Ac. Philad. 1862, p. 347; Bouleng. Ann. & Mag. Nat. Hist. (5) xvi. p. 88; Boettg. Zeitschr. f. Naturw. lviii. 1885, p. 239.

Bothrops atrox, part., Hens. l. c. p. 334.

Trigonocephalus (Bothrops) pubescens, Cope, Proc. Amer. Philos. Soc. xi. 1869, p. 157.

B. M.; v. I.

Bothrops alternatus.

Bothrops alternatus, Dum. & Bibr. vii. p. 1512, pl. lxxxii. fig. 1; Jan, Icon. Oph. 47, pl. vi. fig. 1; Bouleng. Ann. & Mag. Nat. Hist. (5) xvi. p. 88.

Bothrops atrox, part., Hens. l. c.

B. M.; v. I.

Hensel's specimen from Veccaria (Mus. Berl. 6855) belongs to *B. alternatus*; the others, from Porto Alegre (6853-54), to *B. diporus*.

CROTALUS, L.

Crotalus horridus.

Crotalus horridus, Linn. S. N. i. p. 372; Wied, Abbild.; Dum. & Bibr. vii. p. 1472; Hens. l. c. p. 338; Jan, Icon. Oph. 46, pl. iii. figs. 1 & 2.

BATRACHIA.

E C A U D A T A.

Engystomatidæ.

ENGYSTOMA, Fitz.

Engystoma ovale.

Rana ovalis, Schn. Hist. Amph. p. 13.

Engystoma ovale, Fitz. N. Class. Rept. p. 65; Dum. & Bibr. viii. p. 741; Hens. Arch. f. Nat. 1867, p. 140; Bouleng. Cat. Batr. Ecaud. p. 163.

Ocyrrhynchus bicolor (Val.), Guér. Icon. R. A., Rept. pl. xxvii. fig. 2.

B. M.; v. I.

Cystignathidæ.

A. Toes webbed; pupil horizontal.

- a. Toes entirely webbed; outer metatarsals separated by web; habit ranoid *Pseudis*.
- b. Toes webbed at the base; outer metatarsals united; habit stout *Ceratophrys*.

B. Toes free.

1. Pupil horizontal.

- a. Digits dilated into regular disks; vomerine teeth .. *Hylodes*.
- b. Vomerine teeth absent (or situated between the choanæ); tympanum indistinct or hidden *Pahudicola*.
- c. Vomerine teeth situated behind the choanæ; tympanum very distinct *Leptodactylus*.

2. Pupil vertical *Limnomedusa*.

PSEUDIS, Laur.

Pseudis mantidactyla.

Lysapsus mantidactyla, Cope, Proc. Ac. Philad. 1862, p. 352.

Pseudis mantidactyla, Bouleng. Cat. p. 187, and Ann. & Mag. Nat. Hist. (5) xi. 1883, p. 17.

?*Pseudis paradoxa*, Cope, Proc. Amer. Philos. Soc. xxii. (1885) p. 187.

B. M.; v. I.

CERATOPHRYS, Wied.

- a. Upper eyelid with several pointed papillæ; a large bony swelling on each side of the crown *bigibbosa*.
- b. Upper eyelid produced into a horn-like appendage; a bony dorsal shield *dorsata*.
- c. Upper eyelid simple; inner metatarsal tubercle sharp-edged; no dorsal shield *americana*.

Ceratophrys bigibbosa.

Ceratophrys Boiei (non Wied), Hens. *l. c.* p. 121.

Ceratophrys bigibbosa, Peters, Mon. Berl. Ac. 1872, p. 204; Bouleng. Cat. p. 222.

The unique specimen, preserved in the Berlin Museum, is a male, and probably adult.

Ceratophrys dorsata.

Rana cornuta (non L.), Tilesins, Mag. naturf. Fr. Berl. iii. p. 90, pl. iii.

Ceratophrys dorsata, Wied, Abbild.; Wagl. Icon. Amph. pl. xxii.; Dum. & Bibr. viii. p. 431; Bouleng. Cat. p. 225.

B. M.; v. I.

Ceratophrys americana.

Pyrixcephalus americanus, Dum. & Bibr. viii. p. 446; d'Orb. Voy. Amér. Mér. v. p. 10, pl. xiv. figs. 1-4; Hens. *l. c.* p. 123.

Ceratophrys americana, Bouleng. Cat. p. 226.

B. M.; v. I.

HYLODES, Fitz.

Hylodes griseus.

Hyla grisea, Hallow. Proc. Ac. Philad. 1860, p. 485.

Hylodes griseus, Cope, Proc. Ac. Philad. 1863, p. 48; Steindachn. Verh. zool.-bot. Ges. Wien, 1864, p. 245, pl. xvii. fig. 2; Bouleng. Cat. p. 206.

Hylodes, sp., Hens. *l. c.* p. 161.

Hylodes Henselii, Peters, Mon. Berl. Ac. 1870, p. 648.

PALUDICOLA, Wagl.

A. A tubercle on the inner side of the tarsus.

1. Metatarsal tubercles large, compressed, nearer to each other than to the tarsal tubercle.

a. A large lumbar gland; metatarsal tubercles sharp-edged *fuscocomaculata*.

b. No distinct lumbar gland; metatarsal tubercles blunt *albifrons*.

2. Metatarsal tubercles small, oval or subconical.

a. Metatarsal tubercles nearer to each other than to the tarsal tubercle *gracilis*.

. The distance between the tarsal and inner metatarsal tubercles is less than that between the two metatarsal tubercles *Henselii*.

B. No tarsal tubercle, but a strong tarsal fold. *falciipes*.

Paludicola fuscocomaculata.

Liuperus marmoratus (non D. & B.), Burm. Reise La Plata, ii. p. 532.

Eupemphix fuscocomaculatus, Steind. Verh. zool.-bot. Ges. Wien, 1864, p. 272, pl. xiii. fig. 3.

Gomphobates fuscocomaculatus, Steind. Novara, Amph. p. 12.

Lystris fuscomaculatus, Cope, Proc. Ac. Philad. 1868, p. 312.
Pleurodema granulosum, Espada, Viaj. Pacif., Vert. p. 95, pl. i. fig. 6.
Paludicola fuscomaculata, Bouleng. Cat. p. 233, and Ann. & Mag. Nat. Hist. (5) xvi. p. 88; Boettg. Zeitschr. f. Naturw. lviii. p. 243.

B. M.; v. I.

Paludicola albifrons.

Bufo albifrons, Spix, Test. Ran. Bras. p. 48, pl. xix. fig. 2; Peters, Mon. Berl. Ac. 1872, p. 222.
Paludicola albifrons, Wagl. Syst. Amph. p. 206.
Gomphobates marmoratus, Reinh. & Lütke. Vidensk. Medd. 1861, p. 175, pl. iv. fig. 4; Hens. l. c. p. 137; Bouleng. Cat. p. 234.
Eupemphix nattereri, part., Steind. Verh. zool.-bot. Ges. Wien, 1864, p. 271.

Paludicola gracilis.

Gomphobates notatus (non R. & L.), Hens. l. c. p. 138.
Paludicola gracilis, Bouleng. Ann. & Mag. Nat. Hist. (5) xi. 1883, p. 17; Boettg. Zeitschr. f. Naturw. lviii. p. 244.
Paludicola ranina, Cope, Proc. Amer. Philos. Soc. xxii. p. 186.

B. M.; v. I.

Paludicola Henselii.

Gomphobates Kröyeri (non R. & L.), Hens. l. c. p. 139.
Paludicola Henselii, Peters, Mon. Berl. Ac. 1872, p. 223; Bouleng. Cat. p. 235.

Paludicola falcipes.

Limnerus falcipes, Hens. l. c. p. 236.
Paludicola falcipes, Bouleng. Cat. p. 236.

B. M.; v. I.

LEPTODACTYLUS, Fitz.

- a. Toes without dermal margins; hind limb very long, the tibio-tarsal articulation reaching beyond the tip of the snout *gracilis*.
- b. Toes without dermal margins; tibio-tarsal articulation not reaching the eye *mystacinus*.
- c. Toes with dermal margins; tibio-tarsal articulation reaching the eye *ocellatus*.

Leptodactylus gracilis.

Cystignathus gracilis, Dum. & Bibr. viii. p. 406; d'Orb. Voy. Amér. Mér. v. p. 10, pl. xiii. figs. 5-7; Hens. l. c. p. 130.
Leptodactylus gracilis, Espada, Viaj. Pacif., Vert. p. 44; Bouleng. Cat. p. 241, and Ann. & Mag. Nat. Hist. (5) xiv. 1884, p. 389.

B. M.; v. I.

Leptodactylus mystacinus.

Cystignathus Schomburgkii (non Trosch.), Günth. Cat. Batr. Sal. p. 29.
Cystignathus mystacinus, Burm. Reise La Plata, ii. p. 532.

Cystignathus mystaceus, Hens. l. c. p. 125.

Leptodactylus Wuchereri, Espada, l. c. p. 68.

Leptodactylus mystacinus, Bouleng. Cat. p. 244.

B. M. ; v. I.

Leptodactylus ocellatus.

Rana ocellata, Linn. S. N. i. p. 356.

Rana pachypus, Spix, Test. Ran. Bras. p. 26, pl. ii.

Cystignathus pachypus, Wagl. Icon. Amph. pl. xxi.

Cystignathus ocellatus, part., Dum. & Bibr. viii. p. 396.

Cystignathus ocellatus, Hens. l. c. p. 123.

Leptodactylus ocellatus, Girard, Proc. Ac. Philad. 1853, p. 420 ; Bouleng. Cat. p. 247.

Leptodactylus serialis, Gir. l. c. p. 421.

Cystignathus caliginosus (non Gir.), Burm. l. c. p. 532.

Leptodactylus pachypus, Espada, l. c. p. 48.

B. M. ; v. I.

LIMNOMEDUSA, Cope.

Limnomedusa macroglossa.

Cystignathus macroglossus, Dum. & Bibr. viii. p. 405.

Limnomedusa macroglossa, Cope, Journ. Ac. Philad. vi. 1866, p. 94, and Proc. Amer. Philos. Soc. xi. 1869, p. 168 ; Bouleng. Cat. p. 250, and Ann. & Mag. Nat. Hist. (5) xvi. p. 88.

Litopleura maritimus, Espada, Viaj. Pacif., Vert. p. 82.

B. M. ; v. I.

BUFONIDÆ.

BUFO, Laur.

A. Jaws normal.

- a. Parotoids narrow, elongate, pointed behind ; tarso-metatarsal articulation not reaching the eye *arenarum*.
- b. Parotoids enormous *marinus*.
- c. Parotoids moderate, elongate ; tarso-metatarsal articulation reaching in front of the eye, or beyond *crucifer*.

B. Edge of the upper jaw dilated horizontally ; cranial ridge very strong ; parotoids very small, round or sub-triangular *Dorbignyi*.

Bufo arenarum.

Bufo arenarum, Hens. l. c. p. 148 ; Bouleng. Cat. p. 314, and Ann. & Mag. Nat. Hist. (5) xiv. 1884, p. 389.

Bufo mendocinus, Philippi, Arch. f. Nat. 1869, p. 44.

Bufo marinus, var. *platensis*, Espada, Viaj. Pacif., Vert. p. 202.

B. M. ; v. I.

Bufo marinus.

Rana marina, Linn. S. N. i. p. 356.

Bufo marinus, Schneid. Hist. Amph. p. 219 ; Bouleng. Cat. p. 315.

Bufo aqua, Daud. Rain. p. 99, pl. xxxvii.; Spix, Test. Ran. Bras. p. 44, pl. xv.; Wied, Abbild.; Dum. & Bibr. viii. p. 703; Hens. l. c. p. 141.

Bufo horridus, Daud. l. c. p. 97.

Bufo humeralis, Daud. Rept. viii. p. 205.

Bufo maculiventris, Spix, l. c. p. 43, pl. xiv. fig. 1.

Bufo ictericus, Spix, l. c. p. 44, pl. xvi. fig. 1.

Bufo lazarus, Spix, l. c. p. 45, pl. xvii. fig. 1.

Phrynoidis aqua, Cope, Proc. Ac. Philad. 1863, p. 357.

B. M.; v. I.

Bufo crucifer.

Bufo crucifer, Wied, Reise Bras. ii. p. 132; Peters, Mon. Berl. Ac. 1872, p. 221; Bouleng. Cat. p. 316.

Bufo ornatus, Spix, l. c. p. 45, pl. xvi. fig.; Wied, Abbild.; Hens. l. c. p. 147.

Bufo dorsalis, Spix, l. c. p. 46, pl. xvii. fig. 2; Hens. l. c. p. 144.

Bufo scaber, Spix, l. c. p. 47, pl. xx. fig. 1.

Bufo cinctus, Wied, Abbild.

Bufo melanotis, Dum. & Bibr. viii. p. 710; Hens. l. c. p. 148.

Bufo gracilis, Girard, Proc. Ac. Philad. 1853, p. 424.

Phrynoidis ornatus, Cope, l. c.

Bufo levicristatus, Boettg. Zeitschr. f. Naturw. lviii. 1885, pp. 246, 637.

B. M.; v. I.

Bufo Dorbignyi.

Bufo Dorbignyi, Dum. & Bibr. viii. p. 697; d'Orb. Voy. Amér. Mér. v. pl. xv. figs. 5-7; Hens. l. c. p. 141; Bouleng. Cat. p. 322.

Chilophryne Dorbignyi, Espada, l. c. p. 188.

B. M.; v. I.

Hylidæ.

- | | |
|---|----------------------|
| a. Pupil horizontal; toes free | <i>Thoropa.</i> |
| b. Pupil horizontal; toes webbed | <i>Hyla.</i> |
| c. Pupil vertical; fingers and toes free, inner opposable | <i>Phyllomedusa.</i> |

THOROPA, Cope.

Thoropa miliaris.

Rana miliaris, Spix, Test. Ran. Bras. p. 30, pl. vi. fig. 1.

Olotygon abbreviatus, Steind. Novara, Amph. p. 65, pl. iv. figs. 16-18.

Hylodes abbreviatus, Hens. l. c. p. 151.

Olotygon miliaris, Peters, Mon. Berl. Ac. 1872, p. 206.

Thoropa miliaris, Bouleng. Cat. p. 331.

HYLA, Laur.

A. Outer fingers at least one-third webbed.

- | | |
|--|------------------|
| a. Vomerine teeth forming a Π - or λ -shaped figure | <i>faber.</i> |
| b. Vomerine teeth in a transverse series .. | <i>mesophæa.</i> |

B. Outer fingers free or webbed at the base.

1. The distance between the eye and the nostril exceeds the diameter of the eye.

- | | |
|------------------------|---------------|
| a. Throat smooth | <i>rubra.</i> |
|------------------------|---------------|

- . Throat granular; skin tuberculous above; hinder side of thighs marbled with dark brown *nasica*.
 2. The distance between the eye and the nostril hardly equals the diameter of the eye.
a. Groin and sides of thighs with black spots or bars *pulchella*.
b. Hinder side of thighs uniform or with small white spots *Guentheri*.

Hyla faber.

- Hyla faber*, Wied, Reise n. Bras. ii. p. 249, and Abbild.; Peters, Mon. Berl. Ac. 1872, p. 218; Bouleng. Cat. p. 351.
Hyla geographica, var. *sive semilineata*, Spix, Test. Ran. Bras. p. 40, pl. xi. fig. 2.
Hyssiboas faber, Wagl. Syst. Amph. p. 200.
Hyla palmata, part., Dum. & Bibr. viii. p. 545.
Hyla palmata, Burm. Erläuter. p. 102.
Hyla maxima (non Laur.), Günth. Cat. Batr. Sal. p. 99; Hens. *l. c.* p. 156.

B. M.; v. I.

? *Hyla mesophœa*.

- Hyla leucophyllata* (non Beir.), Burm. Erläuter. p. 104, pl. xxxi. fig. 1.
Hyla mesophœa, Hens. *l. c.* p. 154; Peters, Mon. Berl. Ac. 1872, p. 772; Bouleng. Cat. p. 366.

It is not certain whether this species occurs in the province, Hensel not having indicated the locality whence his specimen was obtained.

Hyla rubra.

- Hyla rubra*, Daud. Rain. p. 26, pl. ix.; Dum. & Bibr. viii. p. 592; Bouleng. Cat. p. 403.
Hyla lateristriga, Spix, Spec. Nov. Test. Ran. p. 32, pl. vi. fig. 4.
Hyla cerulea, Spix, *l. c.* p. 37, pl. x. fig. 1.
Hyla x-signata, Spix, *l. c.* p. 40, pl. xi. fig. 3.
Hyla cyanocephala, Dum. & Bibr. p. 558.
Hyla conirostris, Peters, Mon. Berl. Ac. 1863, p. 464.
Scytotis cryptanthus, Cope, Proc. Ac. Philad. 1874, p. 123.

B. M.; v. I. One specimen, from near Rio Grande.

Hyla nasica.

- Hyla nasica*, Cope, Proc. Ac. Philad. 1862, p. 354; Bouleng. Cat. p. 376.
Hyla Vauterii (non Bell), Hens. *l. c.* p. 157.
Hyla granulata, Peters, Mon. Berl. Ac. 1871, p. 651.

B. M.; v. I.

Hyla pulchella.

- Hyla pulchella*, Dum. & Bibr. viii. p. 588; Steind. Verh. zool.-bot. Ges. Wien, 1864, p. 241. pl. xi. fig. 2; Bouleng. Cat. p. 375, and Ann. & Mag. Nat. Hist. (5) xvi. p. 298.
Hyla Vauterii, Bell, Zool. 'Beagle,' Rept. p. 45, pl. xix. fig. 2; Bouleng. Cat. p. 376.

Hyla agrestis, Bell, *l. c.* p. 46, pl. xix. fig. 3.

Hyla prasina, Burm. Erläuter. p. 106, pl. xxxi. fig. 2.

Hyla lateralis, Raddi, Mem. Soc. Ital. xix. p. 76.

Hyla rubicundula (non Reinh. & Lützk.), Hens. *l. c.* p. 158.

Hyla bracteator, Hens. *l. c.* p. 159.

B. M.; v. I.

Hyla Guentheri.

Hyla leucotænia (non Burm.), Günth. Proc. Zool. Soc. 1868, p. 489, pl. xl. fig. 4.

Hyla bracteator (non Hens.), Bouleng. Cat. p. 395, and Ann. & Mag. Nat. Hist. (5) xv. p. 196.

B. M.; v. I.

PHYLLOMEDUSA, Wagl.

Phyllomedusa Iheringii.

Phyllomedusa Iheringii, Bouleng. Ann. & Mag. Nat. Hist. (5) xvi. p. 88.

B. M.; v. I.

A P O D A.

CHTHONERPETON, Ptrs.

Chthonerpeton indistinctum.

Siphonops indistinctus, Reinh. & Lützk. Vidensk. Medd. 1861, p. 203; Hens. *l. c.* p. 162.

Chthonerpeton indistinctum, Peters, Mon. Berl. Ac. 1879, p. 940; Bouleng. Cat. Batr. Caud. p. 104.

XLII.—*Supplement to the Descriptions of Mr. J. Bracbridge Wilson's Australian Sponges.* By H. J. CARTER, F.R.S. &c.

[Plate X.]

[Concluded from p. 379.]

Order VI. HOLORHAPHIDOTA.

Reniera vasiformis, n. sp.

Vasiform, infundibular; wall thin, margin round, uneven, sloped out on one side, truncated (? by the dredge) at the bottom, where the point of attachment is solid. Consistence fragile. Colour light fawn. Surface more or less even generally, but smoother and more cribrate externally than internally. Pores on the outside. Vents numerous, chiefly scattered over the upper and inner side of the margin. Structure fragile, presenting in a vertical section the plumose arrangement generally seen in thin-walled sponges, where the fibres are directed upwards and outwards curvedly from